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CHAPTER 16. SEG ASSESSMENTS, RECOMMENDATIONS

16.1 ASSESSMENTS

After selecting a particular SEG, Assessment data can be viewed by expanding the Assessments menu option. Links for IH and Ergonomic Assessments appear.

16.1.1 IH Assessments

From the IH Assessment screen, users can define an Assessment, create a Workplace Monitoring Plan (WMP) (Formerly part of an IHIP (Army)) sampling task, perform an Assessment, and make Recommendations (**Figure 16-1**).

You are here: [Home](#) > [SEG](#) > [IH Assessments](#)

Industrial Hygiene | **IH Assessments**

To Edit/View Assessment Definition, click the Date link.

Other Actions: [- IH Assessments -](#)

SEG Name: Rotary Aircraft Painting

Assessments Defined for Rotary Aircraft Painting

Create WMP Sampling Task | Make Recommendation

Select	Date	Process	Exposure Route	Hazard	OEL	OEL Value/ Action Level	TWA Period	Exposure Level	Invalid	Exposure Evaluation	EAP	Statistic Used	# of Samples	Need Further Data
<input type="radio"/>	2006/04/16	Aircraft Painting	Inhalation	LEAD AND INORGANIC COMPOUNDS (AS PB)				Assess						

Create WMP Sampling Task | Make Recommendation

Figure 16-1. IH Assessments Page

By selecting the plus icon in the Assessments Defined for SEG section of Figure 16-1, the user can create an assessment definition (**Figure 16-2**). This step has to be performed before an assessment can be completed. This is a multi-step process – **Step 1** is to select the hazards to be defined. Hazards are grouped by exposure route (Inhalation, Contact, etc.).

Define IH Assessment - Step 1 of 3 - Select Hazard

[Inhalation Hazards](#) | [Contact Hazards](#) | [Physical Hazards](#) | [Hazards with Unspecified Exposure Routes](#)

Select the hazard(s) for this Assessment Definition.

SEG Name: Painting SEG

[Cancel](#)

Physical Hazards for Painting SEG

[Continue](#)

Select	Hazard	Process	Target Organ
<input type="radio"/>	Noise, Continuous	Aircraft Painting Aircraft Cleaning	
<input type="radio"/>	Noise, Impact	Aircraft Painting Aircraft Cleaning	
<input type="radio"/>	Noise, High Frequency, Ultra Sonic	Aircraft Painting Aircraft Cleaning	

[Continue](#)

Page: 1 | [View all](#)

[Cancel](#)

[« Previous](#) | [Next »](#)

Figure 16-2. Define IH Assessment (Step 1 of 3)

Step 2 is to select the processes (**Figure 16-3**).

Define IH Assessment - Step 2 of 3 - Select Processes

Select the process(es) for this Assessment Definition.

SEG Name: Painting SEG **Hazard:** Cadmium, Lead, Toluene

Cancel

Processes in Painting SEG with Cadmium, Lead, Toluene

Continue

	Process Name	Shop	Process Frequency	Process Duration	Process Category	Common Process	Process Method
<input type="checkbox"/>	Aircraft Cleaning	Corrosion Control (F00165)	Daily	2-4 hours	Industrial	Cleaning	Spray Gun
<input type="checkbox"/>	Aircraft Painting	Corrosion Control (F00165)	Daily	2-4 hours	Industrial	Painting/Coating	Air Brush

Continue

Cancel

Figure 16-3. Define IH Assessment (Step 2 of 3)

Step 3 is to select the OEL (Figure 16-4).

Define IH Assessment - Step 3 of 3 - Select OEL

Select one OEL for each hazard to complete Assessment Definition.

SEG Name: Painting SEG **Hazard:** Cadmium, Lead, Toluene **Process(es):** Aircraft Cleaning, Aircraft Painting

Cancel

Hazard/OEL Information

Define Assessment

Select	OEL	Matrix/Environmental Media	OEL Value
Cadmium			
<input type="radio"/>	NIOSH 8 Hour TWA	Air	85 ppm
<input type="radio"/>	OSHA 15 minute STEL	Air	80 ppm
Lead			
<input type="radio"/>	NIOSH 8 Hour TWA	Air	70 ppm
<input type="radio"/>	OSHA 15 minute STEL	Air	65 ppm
Toluene			
<input type="radio"/>	NIOSH 8 hour TWA	Air	90 ppm
<input type="radio"/>	EPA 15 minute STEL	Air	85 ppm

Define Assessment

Cancel

Figure 16-4. Define IH Assessment (Step 3 of 3)

The user then presses the Define Assessment button and the definition will appear on the IH Assessment Page (Figure 16-1).

After selecting an Assess link on the IH Assessments page (Figure 16-1), a screen similar to **Figure 16-5** will appear. This screen allows the user to select one or several samples on which to calculate statistics or perform a qualitative assessment.

Perform Assessment - Step 1 of 3 or 4 - Select Samples - For Official Use Only

[Air Breathing Zone Samples](#) [Air General Area Samples](#)

Select the samples or TWAs for calculating statistics or assigning an exposure level.
To calculate statistics, at least 6 samples are required. When sorting note that TWAs and individual samples are sorted separately.

SEG Name: Painting SEG Hazard: Toluene Process(es): Aircraft Painting, Aircraft Depaint

Perform Assessment without Sample Cancel

Breathing Zone Samples - For Official Use Only

Calculate Statistics Perform Quantitative Assessment on One Sample

Select	Sample IDs	Date	Worker	Sample Result	TWA Result/UCL	Sample Period	TWA Period	OEL	OEL Value	Associated Sample ID
<input type="checkbox"/>	123321, 123322, 123323, 123324	2003/05/15	Bell, Joe 789012345		85 ppm/86 ppm		10 hours	NIOSH 8 hr TWA	80 ppm ^Δ	
<input type="checkbox"/>	123348, 123349, 123350, 123351	2003/05/15	Doe, John 123456789		83 ppm/86 ppm		8 hours	NIOSH 8 hr TWA	85 ppm	
<input type="checkbox"/>	123352	2003/05/15	Johnson, Ray 456789012	80 ppm		8 hours		NIOSH 8 hr TWA	85 ppm	123654 123655 123656
<input type="checkbox"/>	123355	2003/05/18	Jones, Don 345678901	83 ppm		8 hours		NIOSH 8 hr TWA	85 ppm	
<input type="checkbox"/>	123356	2003/05/15	Jones, Don 345678901	80 ppm		8 hours		NIOSH 8 hr TWA	85 ppm	
<input type="checkbox"/>	123357	2003/05/15	Smith, James 234567890	82 ppm		8 hours		NIOSH 8 hr TWA	85 ppm	
<input type="checkbox"/>	123358	2003/05/15	Smith, James 234567890	81 ppm		8 hours		NIOSH 8 hr TWA	85 ppm	

Calculate Statistics Perform Quantitative Assessment on One Sample

^Δ Indicates OEL was adjusted to TWVA time period.

Page: 1 | [View all](#) « Previous | Next »

Perform Assessment without Sample Cancel

For Official Use Only

Figure 16-5. Perform Assessment (Step 1 of 3 or 4)

If the Calculate Statistics button is selected, **Figure 16-6** will appear, and the user can calculate normal or lognormal distribution statistics on the selected samples. The user can choose to calculate all the available statistics or selected statistics.

Perform Assessment - Step 2 of 4 - Calculate Statistics

[Normal Distribution Statistics](#) [Lognormal Distribution Statistics](#)

Select the statistics to calculate.

SEG Name: Painting SEG Hazard: Lead Process(es): Aircraft Cleaning, Aircraft Painting OEL Name: OEL #1 OEL Value: 90 ppm

Cancel

Normal Distribution Statistics

Calculate All Statistics Calculate Selected Statistics

Select	Statistic Name	Statistic Type
<input type="checkbox"/>	VW-Test of Data ($\alpha = 0.05$)	Distribution Verification
<input type="checkbox"/>	Number of Samples (N)	Descriptive
<input type="checkbox"/>	Maximum	Descriptive
<input type="checkbox"/>	Minimum	Descriptive
<input type="checkbox"/>	Range	Descriptive
<input type="checkbox"/>	Percent Exceedance (of OEL)	Descriptive
<input type="checkbox"/>	Arithmetic Mean	Descriptive
<input type="checkbox"/>	Arithmetic Standard Deviation	Descriptive
<input type="checkbox"/>	Geometric Mean	Descriptive
<input type="checkbox"/>	Geometric Standard Deviation	Descriptive
<input type="checkbox"/>	Arithmetic Mean UCL (1, 95%) (t-statistic)	Parametric
<input type="checkbox"/>	Arithmetic Mean LCL (1, 95%) (t-statistic)	Parametric
<input type="checkbox"/>	Arithmetic Mean UTL	Parametric
<input type="checkbox"/>	Exceedance Fraction (% > OEL)	Parametric
<input type="checkbox"/>	95th percentile	Parametric
<input type="checkbox"/>	95 % UCL 95 percentile	Parametric

Calculate All Statistics Calculate Selected Statistics

Cancel

Figure 16-6. Perform Assessment (Step 2 of 4)

Step 3 displays the results of the statistic calculations. At this point, the user can select the statistic calculation to be assigned as the exposure level (**Figure 16-7**).

Perform Assessment - Step 3 of 4 - Calculate Statistics

Choose Statistic to assign Exposure Level or click the Continue button to assign an Exposure Level without choosing a Statistic.

SEG Name: Painting SEG Hazard: Lead Process(es): Aircraft Cleaning, Aircraft Painting OEL Name: OEL #1 OEL Value: 90 ppm

Continue Cancel

Normal Distribution Statistics

Assign Exposure Level

Select	Statistic Name	Statistic Type	Statistic Calculation	Percentage of OEL
<input type="radio"/>	W-Test	Distribution Verification	Pass	
<input type="radio"/>	Arithmetic Mean	Descriptive	85 ppm	90
<input type="radio"/>	95% UCL	Parametric	86 ppm	90
<input type="radio"/>	80% UCL	Parametric	84 ppm	90

Assign Exposure Level

Continue Cancel

Figure 16-7. Perform Assessment (Step 3 of 4)

Step 4 displays the exposure level based on the earlier statistical calculations. At this point the user can change the results, document if the exposure is acceptable, unacceptable or if more information is needed (**Figure 16-8**).

Perform Assessment - Step 4 of 4 - Assign Exposure Level

* Indicates Required Field

SEG Name: Painting SEG Hazard: Lead Process(es): Aircraft Cleaning, Aircraft Painting OEL Name: OEL #1 OEL Value: 90 ppm

Save Cancel

Assign Exposure Level

OEL 90 ppm

Action Level 45 ppm

Exposure Level 85 ppm

Start Date * (yyyy/mm/dd)

Stop Date (yyyy/mm/dd)

Exposure Evaluation * ☐ Acceptable ☐ Unacceptable

Need More Data ☐

EAP (Required if Exposure Evaluation is Unacceptable)

Risk Assessment Code (RAC) 2

Exposure Evaluation Rationale * Arithmetic Mean

Exposure Assessment Rationale Comments

Program Office Information

Save Cancel

Figure 16-8. Perform Assessment (Step 4 of 4)

If the user marks the exposure as unacceptable, an exposure assessment priority (EAP) must be assigned. Exposure Assessment Priority (EAP) indicates the IH's priority for collecting information. Operational Risk Management (ORM) indicates risk from a commander's perspective. If the IH has collected sufficient information then the EAP would indicate a low priority even in situations where the ORM would indicate high risk. The DoD IH Working

Group approved the EAP calculations, but they have not approved calculations for ORM and DOEHRs-IH does not contain ORM calculations.

At present, the user will not be allowed to assign an Exposure Level when performing a qualitative assessment. When performing a quantitative assessment, assigning an exposure level will be mandatory. The allowed values for Exposure Assessment Rationale will be a function of

whether the assessment is quantitative or qualitative. If the assessment is qualitative then the Exposure Assessment Rationale will be fixed as Professional Judgment. All other selections for Exposure Assessment Rationale only apply if the assessment is quantitative. In particular, Extrapolate from Similar Processes and Modeling apply to quantitative assessments rather than qualitative assessments. The user will make selections based on the values from the following tables. By selecting the View Available Values icon, the first of three screens will appear.

Step 1 is to select a Health Effect Rating (HER) (**Figure 16-9**). The HER is independent of the exposure. For any particular hazard, the HER is a measure of what the health effect would be if the Exposure Level is equal to the OEL.

Step 2 of 3 is to select the Exposure Rating (ER). The ER looks at the frequency of exposure and the likelihood to exceed the OEL. The user will make selections based on the values from the following tables. By selecting the View Available Values icon, the first of three screens will appear (**Figure 16-10**).

Step 3 of 3 is to determine the Uncertainty Rating by selecting your confidence in existing controls and exposure characterization (**Figure 16-11**).

Select	Category	Health Effects	Health Effects Codes (OSHA) Health Hazard, Safety
<input type="radio"/>	Very High	Acute life threatening or disabling injury or illness	Health Hazard: HE1 - Regulated carcinogens; HE2 - Chronic Toxicity: known or suspect human (IARC Group 1, IARC Group 2A; ACOIH A1 & A2 carcinogens); mutagens; HE17 - Chemical Asphyxiants; HE11 - Respiratory Effects: Acute lung damage, edema Safety: Death, Loss of facility or asset Noise: Immediate hearing loss, impulse noise
<input type="radio"/>	High	Chronic irreversible health effects of concern	Health Hazard: HE3 - Chronic Toxicity: long term organ toxicity other than nervous, respiratory, hematologic or reproductive; HE5 - Reproductive Hazards: teratogenesis or other impairment; HE7 - Nervous System Disturbances: other than narcosis; HE10 - Respiratory Effects: cumulative lung damage Safety: Major property damage Noise: Noise-induced hearing loss permanent and temporary threshold shifts, will eventually lead to permanent hearing loss.
<input type="radio"/>	Moderate	Severe, reversible health effects of concern	Health Hazard: HE14 - Irritation of eyes, nose and throat: Marked; HE6 - Nervous System Disturbances: Cholinesterase inhibition; HE12 - Long term Hematologic Disturbances: Anemias; HE13 - Hematologic Disturbances: Methemoglobinemia; HE4 - Acute Toxicity: Short term high risk effects (non-IDLH) Safety: Minor property damage
<input type="radio"/>	Low	Reversible health effects of concern	Health Hazard: HE15 - Irritation of eyes, nose and throat: Moderate; HE16 - Irritation of eyes, nose and throat: Mild; HE8 - Nervous System Disturbances: Narcosis Safety: Minimal threat to personnel property, first aid, minor supportive medical treatment, but still a violation of a standard.
<input type="radio"/>	Negligible	Nuisance health effects	Health Hazard: HE19 - Low Risk Health Effects (particulates not otherwise classified, inert gases and vapors); HE20 - Odors Safety: No violation of a standard

Figure 16-9. Health Effect Rating (Step 1 of 3)

Select	Category	TG 248	IH Exposure Hypothesis	Ergonomic/Safety Probability	Exposure Profile
<input type="radio"/>	Very High	Frequent Occurs very often, continuously experienced	Expected to be at or above OEL	Injury likely to occur immediately	Gross frequent contact with agents at very high concentrations; Materials have high vapor pressure or dustiness
<input type="radio"/>	High	Likely Occurs several times	Likely to be an exposure but between the OEL and action level	Injury likely to occur over time	Likely contact with agent at high concentrations or infrequent contact at very high concentrations; Materials have significant vapor pressure or dustiness
<input type="radio"/>	Moderate	Occasional Occurs sporadically	Exposure frequently less than action level or 50% OEL and 10% of OEL	Possible injury to occur over time	Occasional contact with agent at moderate concentrations or infrequent contact at high concentrations; Materials have low vapor pressure or dustiness
<input type="radio"/>	Low	Seldom Remotely possible, could occur at some time	Exposure infrequent less than 10% OEL	Injury unlikely to occur	Infrequent contact with agents
<input type="radio"/>	Negligible	Unlikely Can assume will not occur	No Detectable Exposure	Current science cannot determine injury will occur	Current science cannot determine that there is exposure to agent

Figure 16-10. Exposure Rating (Step 2 of 3)

EAP - Step 3 of 3 - Uncertainty Rating [Help](#)

Select the appropriate rating for the Confidence in Controls and Hazard and Exposure Characterization.

Confidence in Existing Controls		
Select	Category	Definition
<input type="radio"/>	Low	Controls inadequate to control exposure. Controls in poor state of repair/non-operational/not actively used.
<input type="radio"/>	Medium	Controls will control worker exposure to acceptable level when adhered to. Examples are reliance solely on administrative controls and/or PPE.
<input type="radio"/>	High	Engineering controls/work practice controls in place and fully operational. Evaluations completed to demonstrate adequate exposure control.

Confidence in Hazard and Exposure Characterization		
Select	Category	Definition
<input type="radio"/>	Low	Potential health outcome based solely upon a qualitative review of the workplace. No quantitative data available for this or similar activities. The source of the hazard has the potential to generate exposures above the action level.
<input type="radio"/>	Medium	Potential health outcome based upon a detailed administrative and onsite review of activities within the workplace and application of professional judgment supported by application of objective based engineering principles. Screening samples or initial air sampling results are within acceptable limits, but not totally conclusive. Comparison to similar, characterized DoD and or private sector operations (qualitative or quantitative).
<input type="radio"/>	High	The "Medium" rating supported by sufficient quantitative evaluation, or detailed technical reports where environmental factors do not influence exposure. Further quantification is not required. The source of hazard does not have potential to generate significant exposures (for example: soldering with low-output irons).

Figure 16-11. Uncertainty Rating (Step 3 of 3)

Based on the user selections from the figures above, the EAP will be scored on a scale of 1 to 125, with 1 meaning low priority and 125 meaning high priority, according to **Figure 16-12**.

A Risk Assessment Code (RAC) 1-5 should be assigned to each hazard that is assigned an EAP. The RAC is equated with the Uncertainty value that is

computed as a function of the Confidence in Hazard and Exposure Characterization and the Confidence in Existing Controls as an intermediate value in the calculation of the EAP.

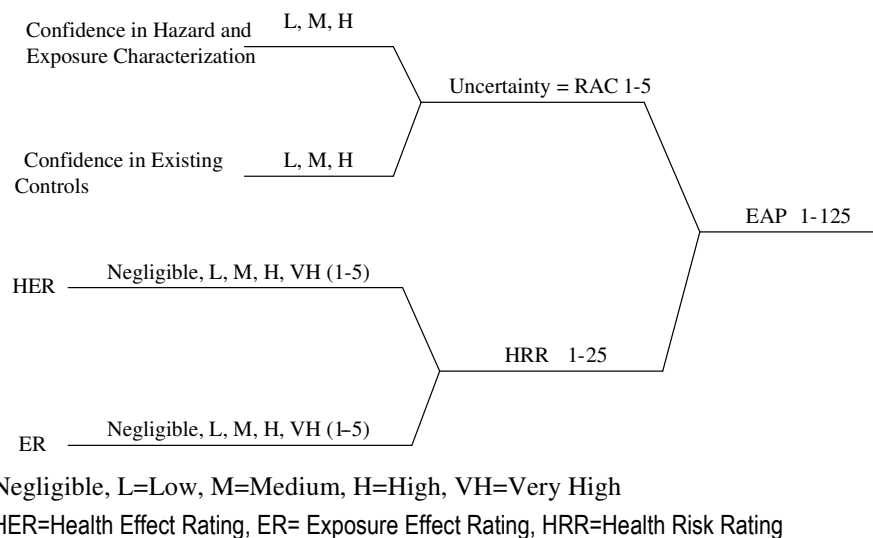


Figure 16-12. EAP Calculation

From the IH Assessments screen (Figure 16-1) the user can also make control and medical recommendations by selecting the Make Recommendation button (**Figure 16-13**). Data entered here will appear in the Recommendation section under the SEG menu tree. This is a multi-step process. Step one is to select the type of recommendation (control or medical). This functionality will be discussed further in the Recommendation section below.

Figure 16-13. Make Recommendation

16.1.2 Ergonomic Assessments

From the Ergonomic Assessment screen (**Figure 16-14**), users can define an Assessment, create a Workplace Monitoring Plan (WMP) ergonomic evaluation task, perform an Assessment, and make Recommendations. The layout of the Ergonomic Assessments screen and functionality is very similar to the IH Assessments area described in the previous section.

Select	Date	Process	Hazard	OEL	Exposure Level	Invalid	Exposure Evaluation	EAP	Ergonomic Evaluation Used	Need Further Data
<input type="radio"/>	2006/04/16	Aircraft Painting	Lighting Level		Assess					
			Glare		Assess					
			Visual Demand		Assess					
			Psychosocial		Assess					

Figure 16-14. Ergonomic Assessments Page

Defining an Assessment is performed by selecting the plus icon or by selecting the Add Assessment Definition option from the Other Actions drop down list (**Figure 16-15**). The same three steps as previously described for an IH Assessment are performed. **Step 1** is to select the hazard. Hazards can be selected for industrial processes or administrative processes.

Note: The OEL's listed above are only for demonstration purposes.

Define Ergonomic Assessment - Step 1 of 3 - Select Hazard

[Industrial Processes](#)

Select the hazard(s) for this Assessment Definition.

SEG Name: Rotary Aircraft Painting

Ergonomic Hazards in Industrial Processes for Rotary Aircraft Painting

Select	Hazard	Process	Target Organ
<input checked="" type="checkbox"/>	Lighting Level	Aircraft Painting	peripheral nervous system
<input checked="" type="checkbox"/>	Psychosocial	Aircraft Painting	peripheral nervous system
<input checked="" type="checkbox"/>	Visual Demand	Aircraft Painting	peripheral nervous system
<input checked="" type="checkbox"/>	Glare	Aircraft Painting	peripheral nervous system

Figure 16-15. Define Ergonomic Assessment (Step 1 of 3)

Step 2 is to select Processes (**Figure 16-16**).

Define Ergonomic Assessment - Step 2 of 3 - Select Processes

Select the process(es) for this Assessment Definition.

SEG Name: Rotary Aircraft Painting **Hazard:** Lighting Level, Psychosocial, Visual Demand, Glare

Processes in Rotary Aircraft Painting with Lighting Level, Psychosocial, Visual Demand, Glare Hazard(s)

Select	Process Name	Shop	Process Frequency	Process Duration	Process Category	Common Process	Process Method
<input checked="" type="checkbox"/>	Aircraft Painting	Corrosion Control (N00014)	Daily	0-15 minutes	Industrial	Coating/Painting Operations	Coating/painting, brush/roller

Figure 16-16. Define Ergonomic Assessment (Step 2 of 3)

Step 3 is to select the OEL and then press the Define Assessment (**Figure 16-17**).

Define Ergonomic Assessment - Step 3 of 3 - Select OEL

Select one OEL for each hazard to complete Assessment Definition.

SEG Name: Rotary Aircraft Painting **Hazard:** Lighting Level, Psychosocial, Visual Demand, Glare **Process(es):** Aircraft Painting

Hazard/OEL Information

Select	Hazard	OEL	OEL Value
<input type="checkbox"/>	Lighting Level		
<input type="checkbox"/>	N/A - No Associated OELs		
<input type="checkbox"/>	Psychosocial		
<input type="checkbox"/>	N/A - No Associated OELs		
<input type="checkbox"/>	Visual Demand		
<input type="checkbox"/>	N/A - No Associated OELs		
<input type="checkbox"/>	Glare		
<input type="checkbox"/>	N/A - No Associated OELs		

Figure 16-17. Define Ergonomic Assessment (Step 3 of 3)

The Assessment will then appear in Ergonomic Assessment Screen (**Figure 16-18**) and the user can perform an Assessment.

You are here: [Home](#) > [SEQ](#) > Ergonomic Assessments

Industrial Hygiene

- Work Basket
- Sample Log
- Location
- Shop
- SEQ
 - Rotary Aircraft Painting
 - Samples
 - Assessments
 - IH
 - Ergonomic
 - Recommendations
 - Controls
 - Medical Surveillance
 - Respiratory Protection Program
 - Master Schedule
 - Reporting
 - Reference Material

Ergonomic Assessments

To Edit/View Assessment Definition, click the Date link.

Other Actions - Ergonomic Assessments -

SEG Name: Rotary Aircraft Painting

Assessments Defined for Rotary Aircraft Painting

Create WMP Ergonomic Evaluation Task Make Recommendation

Select	Date	Process	Hazard	OEL	Exposure Level	Invalid	Exposure Evaluation	EAP	Ergonomic Evaluation Used	Need Further Data
<input type="radio"/>	2006/04/16	Aircraft Painting	Lighting Level		Assess					
			Glare		Assess					
			Visual Demand		Assess					
			Psychosocial		Assess					

Create WMP Ergonomic Evaluation Task Make Recommendation

Figure 16-18. Ergonomic Assessments

From the Ergonomic Assessment Screen (Figure 16-18), the user can perform an assessment by selecting the Assess option. Again, this functionality is very similar to IH Assessments. The difference is that IH Assessments are performed against samples whereas Ergonomic Assessments are performed against Level 1 Ergonomic Evaluations. Level 1 Ergonomic Evaluations are initially created as a task under Master Schedule. Assuming the evaluation has been completed, the user can now perform an assessment on the results. **Step 1** is to select the Ergonomic Evaluation Type (**Figure 16-19**).

You are here: [Home](#) > [SEQ](#) > [Ergonomic Assessments](#) > Assessment Detail

Industrial Hygiene

- Work Basket
- Sample Log
- Location
- Shop
- SEQ
 - Air Maintenance
 - Samples
 - Assessments
 - IH
 - Ergonomic
 - Recommendations
 - Respiratory Protection Program
 - Master Schedule
 - Reporting
 - Reference Material

Perform Ergonomic Assessment - Step 1 of 2 - Select Ergonomic Evaluation

Select the Ergonomic Evaluation for assigning an exposure level.

SEG Name: Air Maintenance Hazard: Energy Expenditure Process(es): Aircraft Cleaning, Aircraft Painting

Cancel

Ergonomic Evaluations

Continue

Select	Ergonomic Evaluation Type	Date	Result/Overall Priority Rating
<input checked="" type="radio"/>	Ergonomic Evaluation Level I - Industrial	2004/01/15	0.0Medium

Continue

Cancel

Figure 16-19. Perform Assessment (Step 1 of 2)

Step 2 is to assign the Exposure Level (**Figure 16-20**).

Perform Assessment - Step 2 of 2 - Assign Exposure Level

* Indicates Required Field

SEG Name: Air Maintenance Hazard: Energy Expenditure Process(es): Aircraft Cleaning, Aircraft Painting

Save Cancel

Assign Exposure Level

OEL Medium OEL Value

Exposure Level Low [View Hazard Scores](#)

Start Date * 2004/07/08 (yyyy/mm/dd)

Stop Date (yyyy/mm/dd)

Exposure Evaluation * ☒ Acceptable ☐ Unacceptable

Need More Data ☐

Exposure Assessment Priority (EAP)
(Required if Exposure Evaluation is Unacceptable)

Exposure Evaluation Rationale * Ergonomic Evaluation Level I - Administrative

Exposure Assessment Rationale Comments

Program Office Information

Save Cancel

Figure 16-20. Perform Assessment (Step 2 of 2)

From the Assign Exposure Level screen (Figure 16-20), the user can view the Hazard Scores (**Figure 16-21**) recorded during the Level 1 Ergonomic Evaluation.

An Exposure Assessment Priority must also be assigned if the exposure is marked as unacceptable. By selecting the magnifying glass, the user will annotate a Health Effect Rating (**Figure 16-22**). This screen is slightly different from the Health Effect Rating in the IH Exposure Assessment screens. Step 2-Exposure Rating and Step 3-Uncertainty Rating screens that follow are the same as described in the IH Assessment area.

Ergonomic Hazard Scores

View Hazard Scores from Ergonomic Assessment Level 1.

[Close Window](#)

Dynamic Posture Scores

Job Factor	Body Region	Aircraft Cleaning		Aircraft Painting
		Cleaning with High Pressure Equipment	Cleaning by Hand (Detail Work)	Painting/Spraying
1.1 a - Repeated reaching or arms held away from the body while unsupported below shoulder level (15-90 degrees away from body)	Shoulder/Neck	4	1	1
1.1 b - Repeated reaching or arms held away from the body while unsupported above shoulder level (>90 degrees away from body)	Shoulder/Neck	0	0	0
1.2 - Repeated arm forces exceeding 10 lbs. (4.5 kg.) (e.g. roughly equivalent to lifting a gallon of milk)	Shoulder/Neck	4	0	4
1.3 - Holding/carrying materials exceeding 25 lbs. (11.3 kg.)	Shoulder/Neck	1	0	1
1.5 - High speed, sudden shoulder movements (e.g., opening a stuck door, pulling and yanking on a bed linen to remove them)	Shoulder/Neck	0	0	0
2.2 - Repeated hand, wrist, or arm movements (includes forearm rotation) (e.g., scanning groceries, washing dishes)	Hand/Wrist/Arm	4	0	4
3.2 - Repeated forward or sideways bending (>20 degrees) (e.g. lifting from floor level)	Back/Torso	0	1	0
3.3 - Repeated twisting (e.g. rushing while lifting, pulling, open a stuck door)	Back/Torso	0	0	0
3.4 - Lifting <ul style="list-style-type: none"> 50 lbs. (22.7 kg.) if upright with the load held close to the body or 10 lbs. (4.5 kg.) if lift involves bending or reaching 	Back/Torso	0	0	0
3.5 High speed or sudden movements (e.g., lifting patients, lifting boxes larger than 30 in [76 cm])	Back/Torso	0	0	0
3.6 - Pushing/pulling > 50 lbs. (22.7 kg.) (e.g. pushing/pulling a full two-drawer file cabinet across a carpeted floor)	Back/Torso	0	0	0
4.3 - Awkward leg postures (e.g. kneeling, squatting crawling, etc.)	Legs/Feet	1	1	1
4.4 - Use of foot pedal while standing	Legs/Feet	0	0	0

[Close Window](#)

Figure 16-21. Ergonomic Hazard Scores

EAP - Step 1 of 3 - Health Effect Rating [Help](#)

Select the appropriate category for the Health Effect Rating.
For guidance in category selection, click the Help link.

Health Effect Rating

[Continue](#)

Select	Category	Health Effects
<input type="radio"/>	Very High	Permanent total disability Permanent loss of worker to injury Lift/carry extremely heavy loads (approx. 87lbs, MILSTD 1472F) Applying extremely heavy forces Extreme awkward or static postures
<input type="radio"/>	High	Permanent partial disability/temporary total disability Loss of worker for more than three months Lifting/carrying heavy loads (approx. 56lbs, MILSTD 1472F) Twisting while lifting- Highly repetitive and forceful movements Using vibrating tools or equipment for more than 6 hours
<input type="radio"/>	Moderate	Lost workday injury/ compensable injury Lifting/carrying moderate loads frequently (approx. 37lbs, MILSTD 1472F) Repetitive and forceful hand movement Using vibrating tools or equipment for more than 4 hours
<input type="radio"/>	Low	First aid/minor supportive medical treatment Lifting carrying moderate load (approx. 37lbs, MILSTD 1472F) Repetitive hand movement Moderately awkward or static postures Using vibrating tools or equipment for more than 2 hours Working in cold temperatures
<input type="radio"/>	Negligible	Temporary muscle discomfort Lifting/carrying light loads (<37lbs, MILSTD 1472F) Occasional awkward or static postures

[Continue](#)

[Cancel](#)

Figure 16-22. Health Effect Rating

16.2 RECOMMENDATIONS

After selecting a particular SEG, the user can view recommendations or search for existing recommendations. By selecting the Recommendations menu option **Figure 16-23** will appear. The user can search for Control or Medical Surveillance recommendations.

You are here: [Home](#) > [SEG](#) > Recommendations

Industrial Hygiene

- Work Basket
- Sample Log
- Location
- Shop
- SEG
 - Rotary Aircraft Painting
 - Samples
 - Assessments
 - IH
 - Ergonomic
 - Recommendations
 - Controls
 - Medical Surveillance
- Respiratory Protection Program
- Master Schedule
- Reporting
- Reference Material

Administration

- Organizations
- Locations
- Program Office Personnel
- Pending Account Requests
- Vendors
- Program Office Equipment
- Labs
- Notifications
- Pick Lists

Resources

- Help Desk Contact Information
- Alerts
- Release Information
- Tablet Configuration Information
- My Profile

Recommendations - Search

Please select one of the options below:

Recommended Controls - Search

Description:

Control Type:

Control Class:

Control Name/Mask Type (Mask Type will be displayed if Control Class is Respirator):

Facepiece:

Cartridge Type:

Status:

Start Date: (yyyy/mm/dd)

Between: (yyyy/mm/dd)

☐ Include Archived Records

[Add Control](#)

Search

Medical Surveillance Program:

Start Date: (yyyy/mm/dd)

Between: (yyyy/mm/dd)

☐ Include Archived Records

[Add Medical Surveillance Program](#)

Search

Medical Surveillance Certification Program:

Start Date: (yyyy/mm/dd)

Between: (yyyy/mm/dd)

☐ Include Archived Records

Figure 16-23. Recommendations – Search Screen

16.2.1 Control Recommendations

By expanding the Recommendations menu and then selecting the Controls option, **Figure 16-24** will appear with all control recommendations.

You are here: [Home](#) > [SEG](#) > Recommendations - Controls > Search Results

Industrial Hygiene

- Work Basket
- Sample Log
- Location
- Shop
- SEG
 - Rotary Aircraft Painting
 - Samples
 - Assessments
 - IH
 - Ergonomic
 - Recommendations
 - Controls
 - Medical Surveillance
- Respiratory Protection Program
- Master Schedule
- Reporting
- Reference Material

Administration

- Organizations
- Locations
- Program Office Personnel
- Pending Account Requests
- Vendors
- Program Office Equipment
- Labs
- Notifications
- Pick Lists

Resources

- Help Desk Contact Information
- Alerts
- Release Information
- Tablet Configuration Information
- My Profile

Recommendations - Controls

Please select a Control. **Other Actions**

SEG Name: Rotary Aircraft Painting Process(es): Aircraft Cleaning, Aircraft Painting, Needle gunning

Recommended Controls

Control Description	Control Type	Control Class	Control Name/Mask Type
Supplied Air Respirator (Hood)	PPE	Respirator	Supplied Air (SAR)

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Figure 16-24. Control Recommendations

Engineering, Administrative, or PPE controls can be added by selecting the plus (+) icon or the Add a Recommended Control option from the Other Actions drop down list. **Figure 16-25** will appear. Controls are filtered by Control Type, Control Class, and Control Name/Mask Type. Once the Control Information is selected, press the Continue button.

Figure 16-25. Add Recommended Control

The Detail screen (**Figure 16-26**) will appear and the user can enter Recommended Control Information, select a Process, Input Graphics and load Program Office Information. Press the Continue button to move to the next screen.

Figure 16-26. Recommended Control – Detail

The final step is to select Hazards Intended to Control and press the Save button (**Figure 16-27**). The control data will then appear in the main Recommendations – Control screen as shown in **Figure 16-28**.

Recommended Control - Detail - Engineering - Select Hazards

Please select the Hazards Controlled.

Other Actions: -Recommended Controls-

Save Cancel

Select	Hazards Name ▲ (* Must select one)
<input type="checkbox"/>	BENZYL CHLORIDE
<input type="checkbox"/>	CHLOROBENZENE
<input type="checkbox"/>	Cold Surfaces
<input type="checkbox"/>	Contact Stress
<input checked="" type="checkbox"/>	Dynamic Posture
<input checked="" type="checkbox"/>	Energy Expenditure
<input type="checkbox"/>	NOISE
<input type="checkbox"/>	Segmental/Hand - Arm Vibration
<input type="checkbox"/>	Static Posture
<input type="checkbox"/>	Whole Body Vibration
<input type="checkbox"/>	XYLENE, ALL ISOMERS

Save Cancel

Figure 16-27. Recommended Control – Detail – Select Hazards

Recommendations - Controls

Please select a Control.

Other Actions: -Controls-

SEG Name: Air Maintenance Process(es): Aircraft Cleaning, Aircraft Painting

Control Description ▲	Control Type	Control Class	Control Name/Mask Type
Ladder usage	Engineering	Ergonomics	Working Height/Working Surface Adjustment
Use goggles for the dust pickup	PPE	Eyes	Goggles, Dust

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Figure 16-28. New Control in Recommendations – Controls List

16.2.2 Medical Surveillance Recommendations

When the user selects Recommendations - Medical Surveillance, **Figure 16-29** will appear with a list of medical recommendations. Medical surveillance recommendations should be based on the assessment of the SEG using the user's selected criterion to determine statistical validity (e.g., upper point estimate) of the exposure profile or at least from professional judgment.

You are here: [Home](#) > [SEG](#) > [Recommendations - Medical Surveillance](#) > Search Results

Industrial Hygiene

- Work Basket
- Sample Log
- Location
- Shop
- SEG
 - Rotary Aircraft Painting
 - Samples
 - Assessments
 - Recommendations
 - Controls
 - Medical Surveillance

- Respiratory Protection Program

Recommendations - Medical Surveillance

Please select a Medical Surveillance Program.

Other Actions: -Controls-

SEG Name: Rotary Aircraft Painting Process(es): Aircraft Cleaning, Aircraft Painting, Needle gunning

Program Name ▲	Start Date	IH Name
LEAD (INORGANIC)	2006/04/15	Mitchell, Glenn

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Figure 16-29. Recommendations – Medical Surveillance

To document a new Medical Surveillance recommendation, select the plus (+) icon or the Add Medical Surveillance Program option from the Other Actions drop down list. **Figure 16-30** will appear. Select the whether or not the medical surveillance is for a certification program and press the Continue button.

Figure 16-30. Add Medical Surveillance Program

If yes is selected, a screen appears where job type can be selected. The system assumes the Medical Surveillance applies to all of the processes assigned to the SEG and the processes will appear at the top of the screen of **Figure 16-31**.

Figure 16-31. Medical Surveillance Certification Program – Detail (Without Processes)

Select the Medical Surveillance Certification Program category (**Figure 16-32**), enter a Start Date, and press the Save button. The recommendation will then appear in the main Recommendations-Medical screen.

If No is selected from Figure 16-30, the system allows the user to select the hazard and processes to associate the Medical Surveillance with **???**.

Medical Surveillance Program - Detail Medical Surveillance Program - Detail

* Indicates Required Field Other Actions: -Medical Surveillance-

SEG Name: AIR FORCE1 SEGA **Process(es):** Aircraft Cleaning, Aircraft Cleaning Preparation

Continue Cancel

Medical Surveillance Information

Medical Surveillance Program * 1,1,1-TRICHLOROETHANE (METHYLCHLOROFORM)

Start Date * 2005/11/27 (yyyy/mm/dd)

Stop Date (yyyy/mm/dd)

Processes

Select	Process <small>^ (* Must select one)</small>	Shop Name
<input type="checkbox"/>	Aircraft Cleaning	SA
<input type="checkbox"/>	Aircraft Cleaning Preparation	Test Shop

Program Office Information

Last Edited By

Last Edited Date

Responsible Program Office Personnel Tennison, Phil

Continue Cancel

Figure 16-32. Medical Surveillance Certification Program – Detail (With Processes)

Select the Medical Surveillance Certification Program category, enter a Start Date, select associated processes, and press the Save button. The recommendation will then appear in the main Recommendations-Medical screen.